

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

Current Report Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **January 7, 2002**

Inhale Therapeutic Systems, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

000-23556

(Commission File No.)

94-3134940

(IRS Employer Identification No.)

**150 Industrial Road
San Carlos, CA 94070**

(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: **(650) 631-3100**

Item 5. Other Events

Effective January 7, 2002, Inhale Therapeutic Systems, Inc. ("Inhale") announced that it has entered into a broad strategic alliance with Enzon, Inc. ("Enzon") that will serve to enhance each company's business model. As more fully described below, the most significant terms of the alliance are:

- Inhale and Enzon will collaborate to develop three products to be specified over time based on the Inhale Inhance™ pulmonary delivery platform and SEDS™ supercritical fluids platform. The collaboration will have a particular focus on the development of products in the oncology field. Enzon will be responsible for commercialization and clinical development of the products while Inhale will be responsible for product development and manufacturing.
- Inhale will be solely responsible for licensing Enzon's PEG patents, which include over 40 U.S. patents, to third parties. Inhale will also have the option to license Enzon's PEG patents for use in Inhale's proprietary products. Enzon will receive a royalty or a share of profits on final product sales of any products that are subject to a license under Enzon's PEG patents, including its branched PEG patents. Enzon retains the right to use its PEG technology for its own proprietary products and those it may develop with co-commercialization partners.
- Enzon will have the option to license Inhale's PEGylation patents for Enzon's proprietary products and Inhale will receive royalties on sales of any such products.
- Enzon and Inhale will explore the development of non-invasive delivery of single-chain antibody (SCA®) products via the pulmonary route. Inhale will become the exclusive pulmonary technology provider for Enzon's single-chain antibody technology using Inhale's proprietary Inhance pulmonary drug delivery technology for at least three years assuming success in the initial proof of concept program.
- Enzon purchased \$40 million of newly issued Inhale convertible preferred stock.
- Enzon and Inhale have agreed to settlement of the patent infringement litigation filed by Enzon against Shearwater Corporation, Inhale's wholly-owned subsidiary.

Enzon and Inhale will jointly develop up to three products using Inhale's platform technologies: the Inhance™ pulmonary delivery platform and SEDS™ supercritical fluids platform. The two companies will collaborate to identify product candidates. Inhale will be responsible for formulation development, delivery system supply, and in some cases, early clinical development. Enzon will have responsibility for most clinical development and for commercialization.

The two companies have agreed to collaborate on realizing the significant therapeutic and competitive potential offered by single-chain antibody (SCA®) products when administered by the pulmonary route. The two companies will initially focus on exploring the utility of the Inhale pulmonary platform for single-chain antibodies and then move to develop single-chain products that will complement the current use of antibodies through the injectable route. Single-chain antibodies are genetically engineered proteins designed to expand on the therapeutic and diagnostic applications possible with monoclonal antibodies. Enzon retains all rights to its SCA products while Inhale retains all rights to its own technology. Inhale will become the exclusive pulmonary technology provider for Enzon's single-chain antibody technology using Inhale's Inhance pulmonary drug delivery technology for at least the next three years assuming a successful initial proof-of-concept program.

Technology Licensing

Enzon will grant to Inhale the exclusive right to grant sublicenses under Enzon's PEG patents to third parties. Enzon will receive a share of profits for certain products that currently incorporate branched PEG technology and royalties on sales of products that are subject to new sublicenses that Inhale grants to its partners under Enzon's PEG Patents. With respect to Pegasys, it is anticipated that Enzon will receive 0.5% or less of Inhale's current partner's sales, which represents equal profit sharing with Inhale on this product. With respect to certain other products in Inhale's current product pipeline that use branched PEG technology, Inhale has advised Enzon that it expects to receive a higher percentage of partner sales in the form of royalty and manufacturing revenues. For such products, Inhale and Enzon will have a profit sharing relationship, but the extent of Enzon's participation in such profit-sharing on a percentage basis is expected to be considerably less than for Pegasys, since Inhale anticipates receiving a higher percentage of partner sales with respect to such products. Enzon retains the right to use all of its PEG technology for its own product portfolio, as well as for those products it develops in co-commercialization collaborations with third parties. It is the intent of the parties that Inhale will be responsible for marketing PEG services and Enzon and Inhale PEG technology to third parties.

Enzon will have an option to license Inhale's PEGylation technology for use with its own portfolio products. Inhale will receive royalties on any sales of Enzon PEGylation products using Inhale technology. Enzon will have the ability to request PEGylation supply and services from Inhale.

Certain drug molecules will be excluded from both the product collaboration and PEG licensing agreements.

Settlement Agreement

In addition to establishing this alliance, the two companies have agreed to settle the patent infringement suit related to Enzon's branched PEG technology filed in 1998 by Enzon against Shearwater Corporation, Inhale's wholly-owned subsidiary. Inhale will receive licensing access to the contested patents under the cross-license agreement described above. Enzon will receive a \$3 million payment from Inhale to cover expenses incurred in connection with defending the branched PEG patents that both companies will now commercially exploit.

Preferred Stock Purchase

In connection with the strategic alliance, Inhale and Enzon also entered into a Preferred Stock Purchase Agreement (the "Purchase Agreement"), pursuant to which Inhale sold to Enzon and Enzon purchased from Inhale forty thousand (40,000) shares of non-voting Series B Convertible Preferred Stock (the "Preferred Stock") at a purchase price of one thousand dollars (\$1,000) per share of Preferred Stock for an aggregate purchase price of forty million dollars (\$40,000,000). The description contained in this Item 5 of the terms of the Purchase Agreement and the rights, privileges and preferences of the Preferred Stock is qualified in its entirety by reference to the full text of the Purchase Agreement, the form of which is attached hereto as **Exhibit 4.21** and the Certificate of Designation, setting forth the rights, privileges and preferences of the Preferred Stock, the form of which is attached hereto as **Exhibit 3.5**.

Pursuant to the Certificate of Designation, the Preferred Stock does not have voting rights and the consent of the holders of the Preferred Stock is not required (except to the extent required by law or otherwise expressly stated in the Certificate of Designation) for taking any corporate action.

The Preferred Stock is convertible, in whole or in part, into that number of shares of common stock (the "Conversion Shares") equal to the quotient of \$1,000 per share divided by the Conversion Price. The "Conversion Price" shall initially be equal to \$22.79 per share or 125% of the Closing Price

and at no time can the Preferred Stock convert into shares of Common Stock at a discount to the Closing Price. The "Closing Price" equals \$18.23 per share and was based upon the average of the Company's closing bid prices as listed on the Nasdaq National Market for the twenty (20) trading days preceding the date of the closing of the transaction.

The Preferred Stock is convertible at the option of the holder after the first anniversary of the original issuance of the Preferred Stock (the "Original Issue Date") or, if earlier, upon a Change in Control (as defined in the Certificate of Designation). Except with respect to an automatic conversion as described below, the Conversion Price shall be equal to 125% of the Closing Price until the third anniversary of the Original Issue Date. Upon the third anniversary of the Original Issue Date, the Conversion Price shall be adjusted to be equal to either (i) the Closing Price, in the event that the average of the closing bid prices of Inhale's Common Stock as quoted on the Nasdaq National Market for the twenty (20) trading days preceding the third anniversary of the original issuance (the "Future Price") is less than or equal to the Closing Price; (ii) the Future Price (as defined above) if the Future Price is greater than the Closing Price but less than 125% of the Closing Price; or (iii) 125% of the Closing Price if the Future Price is equal to or greater than 125% of the Closing Price.

To the extent not previously converted, the Preferred Stock will automatically convert into shares of Inhale Common Stock, based on the then effective Conversion Price, upon the earliest of (i) the fourth anniversary of the Original Issue Date; (ii) immediately prior to an Asset Transfer or Acquisition (as defined in the Certificate of Designation); or (iii) with the consent of the holders of a majority of the then outstanding Series B Preferred Stock immediately prior to a liquidation, dissolution or winding up of Inhale. In the event of an automatic conversion pursuant to an Asset Transfer, Acquisition or liquidation, the adjustment mechanism described above will be applied immediately prior to the automatic conversion.

CERTIFICATE OF DESIGNATION
OF
SERIES B CONVERTIBLE PREFERRED STOCK
OF
INHALE THERAPEUTIC SYSTEMS, INC.

(Pursuant to Section 151 of the
Delaware General Company Law)

INHALE THERAPEUTIC SYSTEMS, INC., a corporation organized and existing under the General Corporation Law of the State of Delaware (hereinafter called the "Company"), hereby certifies that the following resolution was adopted by the Board of Directors of the Company as required by Section 151 of the General Company Law at a meeting duly called and held on December 13, 2001:

RESOLVED, that pursuant to the authority granted to and vested in the Board of Directors of the Company in accordance with the provisions of its Amended and Restated Certificate of Incorporation, as amended, the Board of Directors hereby creates a series of Preferred Stock, par value \$.0001 per share, of the Company and hereby states the designation and number of shares, and fixes the relative rights, preferences and limitations thereof (in addition to the provisions set forth in the Amended and Restated Certificate of Incorporation of the Company, which are applicable to the Preferred Stock of all classes and series), as follows:

Series B Convertible Preferred Stock:

1. Designation and Amount. Forty Thousand (40,000) shares of Preferred Stock, \$.0001 par value, are designated "Series B Convertible Preferred Stock" with the rights, preferences, privileges and restrictions specified herein (the "Series B Preferred Stock").

2. Dividends and Distributions. The holders of the Series B Preferred Stock shall be entitled to receive, when, as and if declared by the Board of Directors, out of funds legally available therefor, dividends at the rate per share equal to any dividend declared on or paid to the Common Stock of the Company ("Common Stock"), whether payable in cash, securities or other property other than dividends payable solely in shares of Common Stock, on an as converted to Common Stock basis determined as of the record date established by the Board of Directors for determining holders of Common Stock entitled to receive such dividends or if no such record date is established, the date of distribution of the dividend (and assuming for purposes of this provision that the Series B Preferred Stock is convertible during the first twelve months following the Original Issue Date (as defined below) on the same basis as it is convertible on the first anniversary of the Original Issue Date).

3. Voting Rights. Except as set forth herein, or as otherwise provided by law, holders of Series B Preferred Stock shall have no voting rights and their consent shall not be required (except to the extent set forth herein or as otherwise required by law) for taking any corporate action.

4. Liquidation Preference. The Series B Preferred Stock shall, with respect to dividend distributions and distributions upon the liquidation, winding-up and dissolution of the Company, rank (i) senior to all classes of Common Stock of the Company and to each other class of capital stock or series of preferred stock the terms of which do not expressly provide that it ranks senior to or on a parity with the Series B Preferred Stock as to dividend distributions and distributions upon the liquidation, winding-up and dissolution of the Company (collectively referred to as "Junior Preferred Stock"); (ii) on a parity with any class of capital stock or series of preferred stock of the Company the terms of which expressly provide that such class or series will rank on a parity with the Series B Preferred Stock as to dividend distributions and distributions upon the liquidation, winding-up and dissolution of the Company (collectively referred to as "Parity Preferred Stock"); and (iii) junior to

each class of capital stock or series of preferred stock of the Company the terms of which expressly provide that such class or series will rank senior to the Series B Preferred Stock as to dividend distributions and distributions upon the liquidation, winding-up and dissolution of the Company (collectively referred to as "Senior Preferred Stock"). In the event of any liquidation, dissolution or winding up of the Company, either voluntary or involuntary (a "Liquidation Event"), following the payment of any distributions due to the holders of Senior Preferred Stock, the holders of the Series B Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Company to the holders of the Common Stock or Junior Preferred Stock of the Company, an amount per share (as adjusted for any combinations, consolidations, stock distributions or stock dividends with respect to the Series B Preferred Stock) equal to \$1,000 (the "Original Issue Price"). If upon the occurrence of such Liquidation Event, the assets and funds thus distributed among the holders of the Series B Preferred Stock and any Parity Preferred Stock shall be insufficient to permit the payment to such holders of their full preferential amount, then the entire assets and funds of the Company legally available for distribution shall be distributed among the holders of the Series B Preferred Stock and any Parity Preferred Stock in proportion to the liquidation preference of such holders' Series B Preferred Stock and Parity Preferred Stock then held by them.

5. Conversion. The Series B Preferred Stock shall convert only as follows:

(a) Conversion at Holder's Option. At any time after the first anniversary of the original issuance of the Series B Preferred Stock (the "Original Issue Date") or, if earlier, a Change in Control, the Series B Preferred Stock shall be convertible, in whole or in part, into such number of fully paid and nonassessable shares of Common Stock equal to the quotient of (i) the Original Issue Price, divided by (ii) the Conversion Price. The "Conversion Price" shall be equal to 125% of the Closing Price (as otherwise adjusted pursuant to the terms of this Section 5) until the earlier of (i) the third anniversary of the Original Issue Date or (ii) the Conversion Date with respect to an automatic conversion pursuant to Section 5(b)(B) or 5(b)(C) (such third anniversary or Conversion Date hereinafter referred to as the "Reset Date"); *provided, however,* that effective upon the Reset Date, the Conversion Price shall be equal to:

(i) the Closing Price (as otherwise adjusted pursuant to the terms of this Section 5) in the event that the average of closing bid prices of the Company's Common Stock as quoted in the Nasdaq National Market (or if not so listed, on the principal exchange or quotation system on which the Common Stock is quoted or listed) for the twenty trading days immediately prior to the third anniversary of the Original Issue Date (the "Future Price") is less than or equal to the Closing Price (as otherwise adjusted pursuant to the terms of this Section 5);

(ii) the Future Price (as otherwise adjusted pursuant to the terms of this Section 5) if the Future Price is greater than the Closing Price (as otherwise adjusted pursuant to the terms of this Section 5) but less than 125% of the Closing Price (as otherwise adjusted pursuant to the terms of this Section 5); or

(iii) 125% of the Closing Price (as otherwise adjusted pursuant to the terms of this Section 5) if the Future Price is equal or greater than 125% of the Closing Price (as otherwise adjusted pursuant to the terms of this Section 5).

The Closing Price shall be equal to \$18.23.

A "Change of Control" shall be deemed to have occurred if any "person" (as such term is used in Section 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) becomes the beneficial owner (as defined in rules 13d-3 and 13d-5 under the Exchange Act) of more than 25% of the total voting power of the Company voting stock.

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(b) Automatic Conversion. To the extent not previously converted, each share of Series B Preferred Stock shall be converted automatically into shares of the Company's Common Stock, based on the then effective Conversion Price upon the earliest to occur of the following (A) the fourth anniversary of the Original Issue Date; (B) immediately prior to any Asset Transfer or Acquisition (as hereinafter defined); or (C) with the consent of the holders of a majority of the then outstanding Series B Preferred Stock, immediately prior to a Liquidation Event; provided, in the case of an automatic conversion pursuant to Sections 5(b)(B) or 5(b)(C), the Common Stock issued upon conversion shall be deemed outstanding on any record date established for purposes of entitling the holder thereof to any distribution or exchange of securities related to any Asset Transfer, Acquisition or Liquidation Event.

An "Asset Transfer" shall mean a sale, lease or other disposition of substantially all the assets of the Company to any person or entity which is not an affiliate of the Company.

An "Acquisition" shall mean (i) any consolidation or merger of the Company with or into any other corporation or other entity or person, or any other corporate reorganization, in which the shareholders of the Company immediately prior to such consolidation, merger or reorganization, own less than 50% of the voting power of the surviving entity immediately after such consolidation, merger or reorganization; or (ii) any transaction or series of related transactions to which the Company is a party in which in excess of fifty percent (50%) of the Company's voting power is transferred, excluding any consolidation or merger effected exclusively to change the domicile of the Company.

(c) Adjustments for Combinations or Subdivisions of Common Stock. In the event the Company at any time or from time to time after the Original Issue Date shall declare or pay any dividend on the Common Stock payable in Common Stock or in any right to acquire Common Stock, or shall effect a subdivision of the outstanding shares of Common Stock into a greater number of shares of Common Stock (by stock split, reclassification or otherwise), or in the event the outstanding shares of Common Stock shall be combined or consolidated, by reclassification or otherwise, into a lesser number of shares of Common Stock, then the Conversion Price, the Closing Price and the maximum and minimum number of shares of Common Stock into which the Series B Preferred Stock may be converted, shall be proportionately decreased or increased, as appropriate.

(d) Mechanics of Conversion. Before any holder of Series B Preferred Stock shall be entitled to receive shares of Common Stock upon conversion, he shall surrender the certificate or certificates evidencing the shares of Series B Preferred Stock to be converted, duly endorsed, at the office of the Company or of any transfer agent for such stock, and shall state therein the name or names in which he wishes the certificate or certificates for shares of Common Stock to be issued. The Company shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series B Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid. Such conversion shall be deemed to have been made (i) in the event of a conversion pursuant to Section 5(a) above, on the date upon which the holder of such outstanding Series B Preferred Stock delivers notice to the Company of such conversion; or (ii) in the event of a conversion pursuant to Section 5(b) above, on the applicable date referenced therein (the "Conversion Date"), and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on the Conversion Date; provided, in the case of clauses (B) and (C), the Common Stock issued upon conversion shall be deemed outstanding on any record date established for purposes of entitling the holder thereof to any distribution or exchange of securities related to any Asset Transfer, Acquisition or Liquidation Event. Notwithstanding the foregoing, in the event that the issuance of the Common Stock issuable upon conversion of the Series B Preferred Stock is subject to the premerger notification requirements of the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as

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amended (the "HSR Act"), the Conversion Date shall be such later date that is the first business day following the expiration or termination of any waiting period under the HSR Act applicable to the issuance of the Common Stock upon conversion of the Series B Preferred Stock provided that any approvals required thereunder have been obtained.

(e) Reservation of Stock Issuable Upon Conversion. The Company shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series B Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series B Preferred Stock.

(f) Fractional Shares. No fractional share shall be issued upon the conversion of any share or shares of Series B Preferred Stock. All shares of Common Stock (including fractions thereof) issuable upon conversion of Series B Preferred Stock by a holder thereof shall be aggregated for purposes of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned aggregation, the conversion would result in the issuance of a fraction of a share of Common Stock, the Company shall, in lieu of issuing any fractional share, pay the holder otherwise entitled to such fractional share a sum in cash equal to the closing bid price of the Company's Common Stock as listed on the Nasdaq National Market (or, if not so listed, on the principal exchange or quotation system on which the Common Stock is quoted or listed) on the Conversion Date, multiplied by such fraction.

(g) Reorganization, Reclassification, Consolidation, Merger or Sale. If any (i) reorganization of the capital stock of the Company, (ii) consolidation or merger involving the Company or any subsidiary of the Company, (other than an Asset Transfer or Acquisition) (each, an "Event") shall be effected in such a way that holders of Common Stock shall be entitled to receive securities, cash or other assets or property, provision shall be made so that the holders of the Series B Preferred Stock shall thereafter be entitled to receive upon conversion of the Series B Preferred Stock the number of shares of stock or other securities or property of the Company to which a holder of the number of shares of Common Stock deliverable upon such conversion would have been entitled on such Event, subject to adjustment in respect of such stock or securities by the terms thereof. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 5 with respect to the rights of the holders of Series B Preferred Stock after the capital reorganization to the end that the provisions of this Section 5 (including adjustment of the Conversion Price then in effect and the number of shares issuable upon conversion of the Series B Preferred Stock) shall be applicable after that event and be as nearly equivalent as practicable.

(h) Notice. Whenever the Conversion Price is adjusted, the Company shall promptly mail to holders of Series B Preferred Stock, first class, postage prepaid, a notice of the adjustment, such notice containing a description of the facts requiring the adjustment and the manner of computing the adjustment. No later than 20 days prior to any Asset Transfer, Acquisition, or any dissolution, winding-up or liquidation of the Company, the Company shall give notice to each holder of Series B Preferred Stock setting forth in reasonable detail the terms of such transaction.

6. No Redemption. The shares of Series B Preferred Stock shall not be redeemable.

7. Amendment. Neither the Amended and Restated Certificate of Incorporation of the Company nor this Certificate of Designation shall be amended or any provision therein or herein waived in any manner which would alter or change the powers, preferences or rights of the Series B Preferred Stock so as to affect them adversely without the affirmative vote of the holders of at least a majority the outstanding shares of Series B Preferred Stock, voting together as a single class; provided, however, without limiting the foregoing, without the consent of the holders of 75% of the outstanding shares of Series B Preferred Stock, no amendment or waiver of the Company's Amended and Restated

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Certificate of Incorporation or this Certificate of Designation shall (i) reduce the number of shares of Series B Preferred Stock whose holders must consent to an amendment or waiver, (ii) reduce the Original Issue Price or change the circumstances under which the holders of Series B Preferred Stock are entitled to receive the Original Issue Price, or (iii) increase the Conversion Price (in a manner inconsistent with the terms herein) or otherwise adversely affect the right to convert the Series B Preferred Stock. Notwithstanding the foregoing, no consent of the holders of Series B Preferred Stock shall be required with respect to the authorization, designation, or issuance of any Senior Preferred Stock, Parity Preferred Stock or other security having a preference to, or on a parity with, the Series B Preferred Stock with respect to dividend distributions or distributions upon the liquidation, dissolution or winding up of the Company.

8. Reissuance of Stock. Shares of Series B Preferred Stock that have been issued and reacquired in any manner, including upon conversion to Common Stock, shall not be reissued and shall have the status of authorized but unissued shares of preferred stock of the Company undesignated as to series and may be designated and issued as part of any series of preferred stock other than Series B Preferred Stock.

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IN WITNESS WHEREOF the undersigned have executed this certificate as of January 7, 2002.

/s/ AJIT S. GILL

Ajit S. Gill
President and Chief Executive Officer

ATTEST:

/s/ ROBERT A. DONNALLY

Robert A. Donnally
Assistant Secretary

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QuickLinks

[Exhibit 3.5](#)

[CERTIFICATE OF DESIGNATION OF SERIES B CONVERTIBLE PREFERRED STOCK OF INHALE THERAPEUTIC SYSTEMS, INC.](#)

**INHALE THERAPEUTIC SYSTEMS, INC.
AND
ENZON, INC.**

PREFERRED STOCK PURCHASE AGREEMENT

January 7, 2002

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**INHALE THERAPEUTIC SYSTEMS, INC.
PREFERRED STOCK PURCHASE AGREEMENT**

THIS PREFERRED STOCK PURCHASE AGREEMENT (this "Agreement") is made as of January 7, 2002, by and between **INHALE THERAPEUTIC SYSTEMS, INC.**, a Delaware corporation with its principal office at 150 Industrial Road, San Carlos, California 94070 (the "Company"), and **ENZON, INC.**, a Delaware corporation with its principal office at 20 Kingsbridge Road, Piscataway, New Jersey 08854 ("Enzon").

RECITALS

WHEREAS, the Company and Enzon have entered into those certain Cross-License Agreement, Product Development Agreement, Single-Chain Antibody Development Agreement and Litigation Settlement Agreement (collectively, the "Related Agreements"); and

WHEREAS, Shearwater Corporation, a subsidiary of the Company ("Shearwater"), is also a party to certain of the Related Agreements;

WHEREAS, in connection with the Related Agreements, the Company desires to sell to Enzon and Enzon desires to purchase from the Company shares of convertible preferred stock of the Company, on the terms and subject to the conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the foregoing recitals and the mutual covenants and agreements contained herein, the parties hereto, intending to be legally bound, do hereby agree as follows:

1. Purchase of Preferred Stock.

1.1. Agreement to Sell and Purchase. At the Closing (as hereinafter defined), the Company will sell to Enzon and Enzon will purchase from the Company forty thousand (40,000) shares of Series B Convertible Preferred Stock of the Company (the "Preferred Stock") at a purchase price of one thousand dollars (\$1,000) per share of Preferred Stock for an aggregate purchase price of forty million dollars (\$40,000,000) (the "Purchase Price"). The rights, privileges and preferences of the Preferred Stock are set forth in the Certificate of Designation annexed hereto as Exhibit A (the "Certificate of Designation").

1.2. Closing; Closing Date. The completion of the sale and purchase of the Preferred Stock (the "Closing") shall be held at 9:00 a.m. (Pacific Time) as soon as practicable following the satisfaction of the conditions set forth in this Section 1 and Section 5 (the "Closing Date"), at the offices of Cooley Godward LLP, 3175 Hanover Street, Palo Alto, California, or at such other time and place as the Company and Enzon may agree.

1.3. Delivery. At the Closing, subject to the terms and conditions hereof, the Company will deliver to Enzon a stock certificate or certificates, in such denominations and registered in such names as Enzon may designate by notice to the Company, representing the Preferred Stock, dated as of the Closing Date (the "Stock Certificates"), against payment of the purchase price therefor by wire transfer, unless other means of payment shall have been agreed upon by Enzon and the Company.

1.4. Hart-Scott-Rodino Compliance. Notwithstanding anything else in this Section 1, if the sale and issuance of the Preferred Stock is subject to the premerger notification requirements of the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the "HSR Act"), it shall also be a condition to the Closing that any waiting period under the HSR Act applicable to the purchase of the Preferred Stock shall have expired or been terminated. The parties shall promptly file any necessary notifications and shall cooperate in promptly filing such notifications and in taking all steps reasonably necessary to obtain early termination of any applicable HSR Act waiting periods. In the event that the

issuance of the Company's Common Stock issuable upon conversion of the Preferred Stock (the "Conversion Shares") is subject to the premerger notification requirements of the HSR Act, the issuance of the Conversion Shares will be subject to the applicable terms of the Certificate of Designation relating thereto and to the expiration or termination of any applicable waiting period under the HSR Act. The parties shall promptly file any necessary notifications and shall cooperate in promptly filing such notifications and in taking all steps reasonably necessary to obtain early termination of any applicable HSR Act waiting periods.

2. Representations and Warranties of the Company.

Except as otherwise specifically disclosed in the Disclosure Schedule attached hereto, the Company hereby represents and warrants to Enzon as follows:

2.1. Authorization. All corporate action on the part of the Company, its officers, directors and shareholders necessary for the authorization, execution and delivery of this Agreement has been taken. The Company has the requisite corporate power to enter into this Agreement and carry out and perform its obligations under the terms of this Agreement. At the Closing, the Company will have the requisite corporate power to issue and sell the Preferred Stock and the Conversion Shares. This Agreement has been duly authorized, executed and delivered by the Company and, upon due execution and delivery by Enzon, this Agreement will be a valid and binding agreement of the Company, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally or by equitable principles.

2.2. No Conflict with Other Instruments. The execution, delivery and performance of this Agreement will not result in any violation of, be in conflict with, or constitute a default under, with or without the passage of time or the giving of notice: (i) any provision of the Company's Amended and Restated Certificate of Incorporation or Bylaws as in effect on the date hereof or at the Closing; (ii) any provision of any judgment, decree or order to which the Company is a party or by which it is bound; (iii) any contract, obligation or commitment to which the Company is a party or by which it is bound; or (iv) any statute, rule or governmental regulation applicable to the Company.

2.3. Amended and Restated Certificate of Incorporation; Bylaws. Attached hereto as Exhibits B and C, respectively, are true, correct and complete copies of the Amended and Restated Certificate of Incorporation, as amended and Bylaws of the Company, as in effect on the date hereof.

2.4. Organization, Good Standing and Qualification. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to carry on its business as now conducted and as proposed to be conducted. The Company is duly qualified to transact business and is in good standing in each jurisdiction in which the failure so to qualify would have a material adverse effect on its business or properties.

2.5. SEC Filings. The Company has made available to Enzon accurate and complete copies (excluding copies of exhibits) of each report, registration statement (on a form other than Form S-3 or S-8) and definitive proxy statement filed by the Company with the Securities and Exchange Commission (the "SEC") between January 1, 2001 and the date of this Agreement (the "Company SEC Documents"). Except as set forth on Part 2.5 of the Disclosure Schedule, each Company SEC Document was filed with the SEC in a timely manner pursuant to the requirements of the Exchange Act. As of the time it was filed with the SEC (or, if amended or superseded by a filing prior to the date of this Agreement, then on the date of such filing): (i) each of the Company SEC Documents complied in all material respects with the applicable requirements of the Securities Act of 1933, as amended (the "Securities Act") or the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as the case may be; and (ii) none of the Company SEC Documents contained any untrue

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statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The consolidated financial statements contained in the Company SEC Documents: (i) complied as to form in all material respects with the published rules and regulations of the SEC applicable thereto; (ii) were prepared in accordance with generally accepted accounting principles applied on a consistent basis throughout the periods covered, except as may be indicated in the notes to such financial statements and (in the case of unaudited statements) as permitted by Form 10-Q of the SEC, and except that unaudited financial statements may not contain footnotes and are subject to year-end audit adjustments; and (iii) fairly present the consolidated financial position of the Company and its subsidiaries as of the respective dates thereof and the consolidated results of operations of the Company and its subsidiaries for the periods covered thereby. Except as set forth in the financial statements included in the Company SEC Documents, neither the Company nor its subsidiaries has any liabilities, contingent or otherwise, other than liabilities incurred in the ordinary course of business subsequent to September 30, 2001, and liabilities of the type not required under generally accepted accounting principles to be reflected in such financial statements. Such liabilities incurred subsequent to September 30, 2001, are not, in the aggregate, material to the financial condition or operating results of the Company and its subsidiaries, taken as a whole.

2.6. Capitalization. The authorized capital stock of the Company consists of (i) 300,000,000 shares of common stock, of which (A) 55,081,020 shares were issued and outstanding as of December 31, 2001, (B) 14,419,743 shares were reserved for issuance upon the exercise of outstanding options and warrants as of December 31, 2001, and (C) 6,643,321 shares were reserved for issuance upon conversion of outstanding convertible indebtedness as of December 31, 2001; and (ii) 10,000,000 shares of preferred stock, 3,100,000 shares of which have been designated Series A Junior Participating Preferred Stock, none of which are outstanding and 40,000 shares of which shall be designated Series B Convertible Preferred Stock as of the filing of the Certificate of Designation with the Secretary of State of the State of Delaware, none of which shall be outstanding prior to the Closing. All issued and outstanding shares of the Company's Common Stock have been duly authorized and validly issued, and are fully paid and nonassessable. Except as set forth herein, the SEC Documents or Part 2.6 of the Disclosure Schedule, there are no (i) preemptive or other outstanding rights, options, warrants, conversion rights or agreements for the purchase or acquisition from the Company of any shares of its capital stock or other securities of the Company; or (ii) obligations of the Company to purchase redeem or otherwise acquire any of its outstanding capital stock or any interest therein or to pay any dividend or make any other distribution in respect thereof. There are no antidilution or price adjustment provisions contained in the terms governing any outstanding security of the Company that will be triggered by the issuance of the Preferred Stock of the Conversion Shares.

2.7. Subsidiaries. Except as disclosed in the Part 2.7 of the Disclosure Schedule, the Company does not presently own or control, directly or indirectly, and has no stock or other interest as owner or principal in, any other corporation or partnership, joint venture, association or other business venture or entity (each entity identified in Schedule 2.7, a "Subsidiary"). Each Subsidiary is duly incorporated or organized, validly existing and in good standing under the laws of its jurisdiction of incorporation or organization and has all requisite power and authority to carry on its business as now conducted and as proposed to be conducted. Each Subsidiary is duly qualified to transact business and is in good standing in each jurisdiction in which the failure to so qualify would have a material adverse effect on its business or properties. Except as set forth in Part 2.7 of the Disclosure Schedule, all of the outstanding capital stock or other voting securities of each Subsidiary is owned by the Company, directly or indirectly, free and clear of any liens, claims, or encumbrances. There are no outstanding obligations of the Company or any Subsidiary to issue any capital stock, voting securities or securities convertible into or exchangeable for capital stock or voting securities of any Subsidiary.

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2.8. Valid Issuance of Preferred Stock and Conversion Shares. The Preferred Stock and the Conversion Shares are duly authorized and, when issued, sold and delivered in accordance with the terms hereof and, as applicable, the Certificate of Designation, will be duly and validly authorized and issued, fully paid and nonassessable free from all taxes, liens, claims, encumbrances and charges with respect to the issue thereof; provided, however, that the Preferred Stock and the Conversion Shares may be subject to restrictions on transfer under state and/or federal securities laws or as otherwise set forth herein. The issuance, sale and delivery of the Preferred Stock and Conversion Shares in accordance with the terms hereof and, as applicable, the Certificate of Designation, will not be subject to preemptive rights or other similar rights of stockholders of the Company. The Conversion Shares have been duly reserved for issuance.

2.9. Offering. Assuming the accuracy of the representations of Enzon in Section 3.3 of this Agreement on the date hereof and on the Closing Date, the offer, issue and sale of the Preferred Stock and the issuance of the Conversion Shares (assuming no change in applicable law prior to the date such Conversion Shares are issued), are and will be exempt from the registration and prospectus delivery requirement of the Securities Act and have been or will be registered or qualified (or are or will be exempt from registration and qualification) under the registration, permit or qualification requirements of all applicable state securities laws. Neither the Company, nor any of its affiliates, nor any person acting on its or their behalf, has directly or indirectly made any offers or sales of any security or solicited any offers to buy any security under circumstances that would require registration under the Securities Act of the issuance of the Preferred Stock to Enzon or the issuance of the Conversion Shares upon conversion of the Preferred Stock. Neither the issuance of the Preferred Stock to Enzon nor the issuance of the Conversion Shares will be integrated with any other issuance of the Company's securities (past, current or future) for purpose of the Securities Act or any applicable rules of Nasdaq.

2.10. Litigation, etc. Except as set forth in the Company SEC Documents, there is no action, suit, proceeding nor investigation pending or, to the Company's knowledge, currently threatened against the Company or any of its Subsidiaries that if adversely determined would reasonably be expected to have a material

adverse effect on the business, condition, prospects, capitalization, assets, liabilities, operations, or financial performance of the Company and its Subsidiaries taken as a whole nor, to its knowledge, is there any basis therefor. The foregoing includes, without limitation, any action, suit, proceeding or investigation, pending or threatened, that questions the validity of this Agreement or the right of the Company to enter into such Agreement.

2.11. Governmental Consents. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state, local or provincial governmental authority on the part of the Company is required in connection with the consummation of the transactions contemplated by this Agreement, except for (i) any filing required to be filed pursuant to the HSR Act as contemplated in Section 1; and (ii) notices required or permitted to be filed with certain state and federal securities commissions, which notices will be filed on a timely basis.

2.12. No Brokers. No broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement based on arrangements made by the Company.

2.13. Compliance. The Company is not in violation of its Amended and Restated Certificate of Incorporation or Bylaws. Neither the Company nor the Subsidiaries have been advised or have reason to believe, that it is not conducting its business in compliance with all applicable laws, rules and regulations of the jurisdictions in which it is conducting business, including, without limitation, all applicable local, state and federal environmental laws and regulations; except where failure to be so in compliance would not materially adversely affect the business, condition, capitalization, assets, liabilities, operations, or financial performance of the Company and its Subsidiaries taken as a whole.

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2.14 Absence of Certain Changes. Except as disclosed in the Company SEC Documents, since September 30, 2001, there has been no material adverse change in the assets, liabilities, business, properties, operations, financial condition or results of operations of the Company and its Subsidiaries, taken as a whole.

2.15 Contracts. The material contracts of the Company and its Subsidiaries described in the Company SEC Documents are in full force and effect on the date hereof; and neither the Company nor its Subsidiaries are in breach of or default under any of such contracts except, in each case, where the failure of such contracts to be in full force or effect or the breach or default of such contract, as applicable, by the Company or its Subsidiaries would not have a material adverse effect on the assets, liabilities, business, properties, operations, financial condition or results of operations of the Company and its Subsidiaries, taken as a whole.

2.16 Intellectual Property. Except for matters to which the Litigation Settlement Agreement between the Company, Shearwater and Enzon relates or as disclosed in the Company SEC Documents (i) the Company and its Subsidiaries have sufficient trademark rights, trade names, patent rights, copyrights, licenses, and governmental authorizations to conduct its business; (ii) neither the Company nor its Subsidiaries have knowledge of any material infringement by it of trademark rights, trade name rights, patent rights, copyrights, licenses, trade secrets or other similar rights of others that the Company or its Subsidiaries believe to be valid; and (iii) no claim has been made or threatened in writing against the Company or any Subsidiary regarding infringement of any third party trademark, trade name, patent, copyright, license, or trade secret except, in each case, where the failure to have such rights, such infringement or such claim of infringement, as applicable, would not have a material adverse effect on the assets, liabilities, business, properties, operations, financial condition or results of operations of the Company and its Subsidiaries, taken as a whole.

3. Representations and Warranties of Enzon.

Enzon hereby represents and warrants to the Company as follows:

3.1. Legal Power. Enzon has the requisite corporate power and authority to enter into this Agreement, to carry out and perform its obligations under the terms of this Agreement. All action on Enzon's part required for the lawful execution and delivery of this Agreement have been or will be effectively taken prior to the Closing.

3.2. Due Execution. This Agreement has been duly authorized, executed and delivered by Enzon, and, upon due execution and delivery by the Company, this Agreement will be a valid and binding agreement of Enzon, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally or by equitable principles.

3.3. Investment Representations. In connection with the sale and issuance of the Preferred Stock and the Conversion Shares (collectively the "Securities"), Enzon makes the following representations:

(a) Investment for Own Account. Enzon is acquiring the Securities for its own account, not as nominee or agent, for investment and not with a view to, or for resale in connection with, any distribution or public offering thereof within the meaning of the Securities Act.

(b) Transfer Restrictions; Legends. Enzon understands that (i) the Securities have not been registered under the Securities Act; (ii) the Securities are being offered and sold pursuant to an exemption from registration and that the Securities must be held by Enzon indefinitely, and that Enzon must, therefore, bear the economic risk of such investment indefinitely, unless a subsequent

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disposition thereof is registered under the Securities Act or is exempt from such registration; (iii) each certificate representing the Securities will be endorsed with the following legend:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR UNDER THE SECURITIES LAWS OF CERTAIN STATES. THESE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE ACT AND THE APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. UNLESS SOLD PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT OR RULE 144 UNDER THE ACT, THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER TO THE EFFECT THAT ANY PROPOSED TRANSFER OR RESALE IS IN COMPLIANCE WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

(iv)

each certificate representing the Preferred Stock will also be endorsed with the following legend:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS, INCLUDING RESTRICTIONS ON TRANSFERABILITY, OF THAT CERTAIN STOCK PURCHASE AGREEMENT, DATED JANUARY 7, 2002. A COPY OF SUCH STOCK PURCHASE AGREEMENT WILL BE FURNISHED TO THE RECORD HOLDER OF THIS CERTIFICATE WITHOUT CHARGE UPON WRITTEN REQUEST TO INHALE THERAPEUTIC SYSTEMS, INC. AT ITS PRINCIPAL PLACE OF BUSINESS.

and (v) the Company will instruct any transfer agent not to register the transfer of the Securities (or any portion thereof) unless the conditions specified in the foregoing legends are satisfied, until such time as a transfer is made, pursuant to the terms of this Agreement, and in compliance with Rule 144 under the Securities Act or pursuant to a registration statement or, if the opinion of counsel referred to above is to the further effect that such legend is not required in order to establish compliance with any provisions of the Securities Act or this Agreement, or other satisfactory assurances of such nature are given to the Company.

(c) Removal of Legends. Unless otherwise required by applicable securities laws, the Company shall be obligated, at the request of Enzon, to cause the transfer agent to reissue unlegended certificates with respect to the Conversion Shares if (i) Enzon shall have obtained an opinion of counsel reasonably acceptable to the Company to the effect that the Conversion Shares with respect to which unlegended certificates are to be issued may lawfully be disposed of without registration, qualification or legend; or (ii) the Conversion Shares can be sold without restriction as to the number of securities sold under Rule 144(k). Further, the Company will instruct the transfer agent to remove the legend on Conversion Shares (i) upon the sale of such Conversion Shares pursuant to an effective registration statement, provided the transfer agent and Company have received evidence or assurances of such sale in a form satisfactory to the transfer agent and the Company or (ii) upon the sale of such Conversion Shares pursuant to Rule 144 under the Securities Act, provided the transfer agent and the Company have received evidence or assurances from Enzon of compliance with Rule 144 in a form satisfactory to the transfer agent and the Company;

(d) Financial Sophistication. Enzon has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment in connection with the transactions contemplated in this Agreement.

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(e) Accredited Investor Status. Enzon is an "accredited investor" as such term is defined in Rule 501(a) of the rules and regulations promulgated under the Securities Act.

3.4. No Brokers. No broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement based on arrangements made by Enzon.

4. Conditions to Closing.

4.1. Conditions to Obligations of Enzon at Closing. Enzon's obligation to purchase the Preferred Stock at the Closing is subject to the fulfillment to Enzon's satisfaction, on or prior to the Closing, of all of the following conditions, any of which may be waived by Enzon:

(a) Representations and Warranties True; Performance of Obligations. The representations and warranties made by the Company in Section 2 hereof shall be true and correct in all material respects on the Closing Date with the same force and effect as if they had been made on and as of said date and the Company shall have performed and complied with all obligations and conditions herein required to be performed or complied with by it on or prior to the Closing and a certificate duly executed by an officer of the Company, to the effect of the foregoing, shall be delivered to Enzon.

(b) Proceedings and Documents. All corporate and other proceedings in connection with the transactions contemplated at the Closing and all documents and instruments incident to such transactions shall be reasonably satisfactory in substance and form to counsel to Enzon, and counsel to Enzon shall have received all such counterpart originals or certified or other copies of such documents as they may reasonably request. The Certificate of Designation shall have been filed with the Secretary of State of the State of Delaware and shall continue to be in full force and effect as of the Closing Date. The Company shall have delivered (or caused to have been delivered) to Enzon, the Stock Certificates. The Conversion Shares shall have been duly authorized and reserved for issuance upon conversion of the Preferred Stock.

(c) Qualifications, Legal Investment. All authorizations, approvals, or permits, if any, of any governmental authority or regulatory body of the United States or of any state that are required in connection with the lawful sale and issuance of the Preferred Stock shall have been duly obtained and shall be effective on and as of the Closing. No stop order or other order enjoining the sale of the Preferred Stock shall have been issued and no proceedings for such purpose shall be pending or, to the knowledge of the Company, threatened by the SEC, or any commissioner of corporations or similar officer of any state having jurisdiction over this transaction. At the time of the Closing, the sale and issuance of the Securities shall be legally permitted by all laws and regulations to which Enzon and the Company are subject. No litigation, statute, rule, regulation, executive order, decree, ruling or injunction will have been enacted, entered, promulgated or endorsed by or in any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby which prohibits the consummation of any of the transactions contemplated by this Agreement or the Related Agreements.

(d) Execution of Agreements. The Company shall have executed this Agreement and the Related Agreements and have delivered such agreements to Enzon. Shearwater shall have executed the Related Agreements to which it is a party and have delivered such agreements to Enzon.

(e) Officer's Certificate. The Company shall have delivered to Enzon a certificate or certificates dated as of the Closing Date and executed by the Chief Executive Officer or the Chief Financial Officer of the Company certifying, as to the Company, the matters contained in this Section 4.1(a).

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(f) Secretary's Certificate. The Company shall have delivered to Enzon a certificate of the Secretary of the Company certifying as to the truth and accuracy of (i) the resolutions of the Board of Directors' relating to the transaction contemplated hereby (a copy of which shall be included with such certificate) and (ii) the incumbency and signatures of each of the officer of the Company executing this Agreement and the certificate set forth in Section 4.1(e) on behalf of the Company.

(g) Trading and Listing. Trading and listing of the Common Stock on the Nasdaq national market shall not have been suspended by the SEC or Nasdaq.

(h) Blue Sky. The Company shall have obtained all necessary "blue sky" law permits and qualifications, or have the availability of exemptions therefrom, required by any state for the offer and sale of the Preferred Stock and the Conversion Shares.

(i) Material Adverse Change. Since the date of this Agreement, there shall not have occurred any event which results in a material adverse effect on the business, condition, capitalization, assets, liabilities, operations or financial performance of the Company and its Subsidiaries taken as a whole.

(j) Opinion. The Company shall have delivered to Enzon the opinion of Cooley Godward LLP, counsel to the Company, dated as of the Closing Date in substantially the form attached hereto as Exhibit D.

4.2. Conditions to Obligations of the Company. The Company's obligation to issue and sell the Preferred Stock at the Closing is subject to the fulfillment to the Company's satisfaction, on or prior to the Closing of the following conditions, any of which may be waived by the Company:

(a) Representations and Warranties True. The representations and warranties made by Enzon in Section 3 hereof shall be true and correct in all material respects on the Closing Date with the same force and effect as if they had been made on and as of said date.

(b) Performance of Obligations. Enzon shall have performed and complied with all agreements and conditions herein required to be performed or complied with by it on or before the Closing, and a Certificate duly executed by an officer of Enzon, to the effect of the foregoing, shall be delivered to the Company. Enzon shall have delivered the Purchase Price, by wire transfer, to the account designated by Inhale for such purpose.

(c) Qualifications, Legal Investment. All authorizations, approvals, or permits, if any, of any governmental authority or regulatory body of the United States or of any state that are required in connection with the lawful sale and issuance of the Preferred Stock shall have been duly obtained and shall be effective on and as of the Closing. No stop order or other order enjoining the sale of the Preferred Stock shall have been issued and no proceedings for such purpose shall be pending or, to the knowledge of the Company, threatened by the SEC, or any commissioner of corporations or similar officer of any state having jurisdiction over this transaction. At the time of the Closing, the sale and issuance of the Preferred Stock and the Conversion Shares shall be legally permitted by all laws and regulations to which Enzon and the Company are subject. No litigation, statute, rule, regulation, executive order, decree, ruling or injunction will have been enacted, entered, promulgated or endorsed by or in any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby which prohibits the consummation of any of the transactions contemplated by this Agreement or the Related Agreements.

(d) Execution of Agreements. Enzon shall have executed this Agreement and the Related Agreements and have delivered such agreements to Inhale or, as applicable, Shearwater.

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5. Covenants of Enzon.

5.1. Restriction on Sale or Transfer of Preferred Stock. Enzon hereby covenants and agrees that, without the prior written consent of the Company, it will not contract to sell, sell or otherwise transfer, loan, pledge or grant any rights with respect to any shares of the Preferred Stock acquired pursuant to this Agreement (or purchase or sell any derivative security that has a similar effect or enter into any contract that has a similar effect). Notwithstanding the foregoing, Enzon may transfer the Preferred Stock to a wholly owned-subsiary or parent corporation that owns all of the capital stock of Enzon provided such transferee agrees to be subject to all restrictions set forth in Section 5 of this Agreement as if such transferee were Enzon.

5.2 Standstill. Other than shares of Preferred Stock which it is purchasing pursuant to this Agreement and the Conversion Shares issuable upon conversion thereof, Enzon hereby covenants and agrees that it will not, nor will it permit any of its subsidiaries (i) to purchase or otherwise acquire, directly or indirectly, any equity securities of the Company (or rights or options to purchase such securities) or (ii) form, join or participate in a "group" (as defined in the Securities Exchange Act of 1934 and the rules promulgated thereunder) with respect to the beneficial ownership of any equity securities of the Company without the prior approval of the Company. Notwithstanding the foregoing, Enzon may, for purposes of any hedging or similar transaction, purchase, sell or otherwise acquire or dispose of options or other derivative securities having the same economic effect as a purchase of the Company's equity securities ("Derivative Securities"); provided that (i) neither Enzon, its subsidiaries nor any group which Enzon has formed, joined or participated in shall file a Schedule 13D indicating its intention to assume control of the Company, and (ii) the aggregate amount of equity securities which Enzon acquires or has a right to acquire pursuant to such Derivative Securities at no time shall exceed 50% of the maximum number of Conversion Shares issuable upon conversion of the Preferred Stock at the Closing Date (assuming, solely for purposes of the foregoing, that the Preferred Stock is convertible at the Closing Date at a conversion price equal to 125% of the Closing Price (as defined in the Certificate of Designation)). This Section 5.2 shall terminate and be of no further force or effect five (5) years from the Closing or such earlier date as shall be agreed to by the Company; provided, that this Section 5.2 shall automatically terminate upon the occurrence of any of the following events: (i) the filing with the SEC of a Schedule 13D by any person or entity indicating that a person or entity has acquired (a) more than 33% of any class of the Company's voting equity securities, or (b) has acquired at least 5% of any class of the Company's voting equity securities which Schedule 13D expresses the filing party's intention to assume control of the Company, whether by tender offer, merger, proxy contest or otherwise; (ii) the commencement of a tender offer by any person or entity to acquire 33% or more of the Company's outstanding voting equity securities; or (iii) the solicitation of proxies by any party other than the Company which is intended to effect a change in the majority of the members of the Company's Board of Directors.

6. Covenants of the Company.

6.1 Reporting Status; S-3 Eligibility. The Company's Common Stock is registered under Section 12 of the Exchange Act. With a view to making available to Enzon the benefits of certain rules and regulations of the SEC which may permit the sale of the Conversion Shares to the public without registration, the Company agrees to use its reasonable efforts to file with the SEC, in a timely manner all reports and other documents required of the Company under the Exchange Act. The Company currently meets the "registrant eligibility" requirement set forth in the general instructions to Form S-3 to enable the registration of the resale of the Conversion Shares as provided in Section 7 herein. The Company will otherwise take such further action as Enzon may reasonably request, all to the extent required from time to time to enable Enzon to sell the Conversion Shares without registration under the Securities Act or any successor rule or regulation adopted by the SEC.

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6.2 Listing. On or before the 15th business day after the date of this Agreement, the Company will secure the listing of the Conversion Shares on Nasdaq (subject to official notice of issuance) and, so long as Enzon owns any of the Preferred Stock or the Conversion Shares, will maintain such listing or an alternative listing on the American Stock Exchange or the New York Stock Exchange and will comply in all material respects with the Company's reporting, filing and other obligations under the bylaws or rules of the National Association of Securities Dealers, Inc. and such exchanges, if applicable.

6.3 No Integration; Form D Filing. The Company will not make any offers or sales of any security under circumstances that would cause the offering of the Preferred Stock or issuance of the Conversion Shares pursuant to this Agreement to be integrated with any other offering of securities by the Company (i) for the purpose of any stockholder approval provision applicable to the Company or its securities or (ii) for purposes of the registration requirements set forth in Section 5 of the Securities Act. On or before the 15th day following the Closing Date, the Company shall file a Form D pursuant to Securities and Exchange Commission Regulation D with respect to the issuance of the Preferred Stock.

7. Registration Rights.

7.1 S-3 Demand Registration. Upon the written request of Enzon, the Company shall use reasonable commercial efforts to prepare and file with the SEC, as promptly as reasonably practicable following receipt of such notice, a registration statement on Form S-3 (or any successor to Form S-3), covering the resale of the Conversion Shares (the "S-3 Registration Statement") and use commercially reasonable efforts, as soon as reasonably practicable thereafter, to effect such registration and any related qualification or compliance with respect to all Conversion Shares then outstanding and held by Enzon or issuable upon conversion of the then outstanding Preferred Stock held by Enzon; provided however, that the Company shall not be obligated to file such S-3 Registration Statement or effect any such registration, qualification or compliance:

(a) if Form S-3 (or any successor form) is not available for such offering by Enzon;

(b) at any time prior to the earlier of (i) date 60 days prior to the first anniversary of the Closing Date, in which case the S-3 Registration Statement need not be declared effective until the first anniversary of the Closing Date, or (ii) the conversion of the Preferred Stock;

(c) if the Company shall furnish to Enzon a certificate signed by the Chairman of the Board of Directors of the Company stating that in the good faith judgment of the Board of Directors of the Company, it would be materially detrimental to the Company and its shareholders for such S-3 Registration Statement to be filed or effected at such time, in which event the Company shall have the right, to defer the filing of the S-3 Registration Statement for not more than ninety (90) days after receipt of the request of Enzon to effect such registration; provided, that a delay pursuant to this Section 7.1(c) shall be no longer than the Board of Directors reasonably deems necessary and shall not be invoked more than one time in any twelve-month period; or

(d) if, at the time of the receipt of such request, all the Conversion Shares held by or issuable to Enzon may be sold under Rule 144 in any ninety (90) day period.

7.2 S-1 Demand Registration. In the event that Form S-3 (or any successor form) is not then available for the offering requested by Enzon pursuant to Section 7.1 and otherwise permitted pursuant to the terms of this Agreement, the Company shall, upon the written request of Enzon, use reasonable commercial efforts to prepare and file with the SEC, as promptly as reasonably practicable following receipt of such notice, a registration statement on Form S-1 (or any successor to Form S-1), covering the resale of the Conversion Shares (the "S-1 Registration Statement") and use commercially reasonable efforts, as soon as reasonably practicable thereafter, to effect such registration and any related qualification or compliance with respect to all Conversion Shares then outstanding and held by

Enzon or issuable upon conversion of the then outstanding Preferred Stock held by Enzon; provided however, that the Company shall not be obligated to file such S-1 Registration Statement or effect any such registration, qualification or compliance:

(a) if Form S-3 (or any successor form) is then available for such offering by Enzon;

(b) at any time prior to the earlier of (i) date 60 days prior to the first anniversary of the Closing Date, in which case the S-1 Registration Statement need not be declared effective until the first anniversary of the Closing Date, or (ii) the conversion of the Preferred Stock;

(c) after the Company, (i) in the event that Enzon has not exercised the Extension Option (as defined below), has effected two (2) registrations pursuant to this Section 7.2 and such registrations have been declared or ordered effective and remained effective for at least such time period as required pursuant to Section 7.5(b); or (ii) in the event that Enzon has exercised the Extension Option, the Company has already effected one (1) registration pursuant to this Section 7.2 and such registration has been declared or ordered effective for at least such time period as required pursuant 7.5(b);

(d) if the Company shall furnish to Enzon a certificate signed by the Chairman of the Board of Directors of the Company stating that in the good faith judgment of the Board of Directors of the Company, it would be materially detrimental to the Company and its shareholders for such S-1 Registration Statement to be filed or effected at such time, in which event the Company shall have the right, to defer the filing of the S-1 Registration Statement; provided, that a delay pursuant to this Section 7.2(d) (i) shall be no longer than the Board of Directors reasonably deems necessary, (ii) shall not be invoked more than one time with respect to any particular demand to file an S-1 Registration Statement, or (iii) delay such filing(s) more than ninety (90) days in the aggregate for all S-1 Registration Statements, after receipt of the request(s) of Enzon to effect such registration(s); or

(e) if, at the time of the receipt of such request, all the Conversion Shares held by or issuable to Enzon may be sold under Rule 144 in any ninety (90) day period.

As used herein, the term "Registration Statement" shall mean the S-3 Registration Statement or S-1 Registration Statement, as applicable.

7.3 Suspension of Effectiveness. Notwithstanding any other provision of this Agreement, Enzon understands and acknowledges that there may be periods during which the Company may determine, in good faith, that it is in the best interest of the Company and its stockholders to defer disclosure of non-public information until such information has reached a more advanced stage and that during such periods sales of Conversion Shares and the effectiveness of any Registration Statement covering Conversion Shares, may be suspended or delayed. Enzon agrees to provide one (1) day advance notice of any proposed sale by Enzon of any Conversion Shares pursuant to the S-3 Registration Statement; provided that such notice may set forth Enzon's intention to sell for up to thirty (30) days following the date of such notice and Enzon shall have been deemed to have provided sufficient notice with respect all such sales. Whether or not such notice from Enzon has been provided to the Company, Enzon agrees that upon receipt of any notice from the Company of a suspension pursuant to this

Section 7.3, Enzon will forthwith discontinue its disposition of Conversion Shares pursuant to the Registration Statement until Enzon's receipt of notice from the Company that the use of the Registration Statement may be resumed and, where appropriate as determined by the Company, a supplement or amendment to the prospectus and, if so directed by the Company, Enzon will use its best efforts to deliver to the Company all copies, other than permanent file copies then in Enzon's possession, of the prospectus relating to such Conversion Shares current at the time of receipt of such notice; *provided however*, that in no event shall such periods in which disposition of Conversion Shares pursuant to the Registration Statement is suspended pursuant to the foregoing exceed 45 days in any one instance or an aggregate

of 90 days in any 360 day period. Notwithstanding the foregoing, no such suspension period shall be longer than the Company reasonably deems necessary.

7.4 Registration Expenses. The Company shall pay the expenses incurred by the Company in complying with Section 7 hereof, including, all registration and filing fees, NASD fees, exchange listing fees, printing expenses, fees and disbursements of counsel for the Company, blue sky fees and expenses and the expense of any special audits incident to or required by any such registration (but excluding any and all underwriting discounts and selling commissions applicable to the sale of Conversion Shares by Enzon). The Company shall not, however, be required to pay for expenses of any registration proceeding begun pursuant to Section 7.1 or 7.2, the request of which has been subsequently withdrawn by Enzon unless (a) the withdrawal is based upon material adverse information concerning the Company of which Enzon was not aware at the time of such request or (b) Enzon agrees to forfeit its right to one requested registration pursuant to Section 7.2. If the Company is required to pay the registration expenses of a withdrawn offering pursuant to clause (a) above, then Enzon shall not forfeit its rights pursuant to Section 7.2 to an S-1 demand registration.

7.5 Obligations of the Company. Subject to Section 7.3, whenever required to effect the registration of any Conversion Shares, the Company shall:

(a) Cause any S-3 Registration Statement to remain effective until the earlier of the date on which all Conversion Shares covered by the S-3 Registration Statement (i) have been sold, transferred or disposed of by Enzon (or a permitted assignee pursuant to Section 7.9), pursuant to the S-3 Registration Statement or otherwise, or (ii) are eligible for sale pursuant to Rule 144(k).

(b) Cause any S-1 Registration Statement to remain effective until the earlier of (i) the date on which all Conversion Shares covered by the S-1 Registration Statement have been sold, transferred or disposed of by Enzon (or a permitted assignee pursuant to Section 7.9), pursuant to the S-1 Registration Statement or otherwise, (ii) the date on which all Conversion Shares covered by the S-1 Registration Statement are eligible for sale pursuant to Rule 144(k), or (iii) (A) the date thirty (30) days following the initial effective date of the S-1 Registration Statement, or (B) with respect to the initial S-1 Registration, if so requested by Enzon in writing, the date which is the earlier of (Y) a date subsequent to the 30th day following the initial effective date of such S-1 Registration Statement specified by Enzon in writing or (Z) sixty (60) days following the initial effective date of such S-1 Registration Statement (the "Extension Option"), in which event Enzon shall forfeit its right to any further requested registration pursuant to Section 7.2; provided, however, that if use of the S-1 Registration Statement is suspended pursuant to Section 7.3, the Company shall cause such S-1 Registration Statement to remain effective for an additional period equal to the length of time of such suspension.

(c) As soon as reasonably practicable, prepare and file with the SEC such amendments and supplements to such Registration Statement and the prospectus used in connection with such Registration Statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such Registration Statement.

(d) As soon as reasonably practicable, furnish to Enzon such number of copies of a prospectus, including a preliminary prospectus, in conformity with the requirements of the Securities Act, and such other documents as it may reasonably request in order to facilitate the disposition of Conversion Shares included in such Registration Statement.

(e) Use commercially reasonable efforts to register and qualify the securities covered by such Registration Statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested Enzon, provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service

of process in any such states or jurisdictions in which it is not otherwise required to so qualify or consent.

(f) As soon as reasonably practicable, notify Enzon at any time when a prospectus relating to such offering is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing.

(g) As soon as reasonably practicable, notify Enzon (i) when the Registration Statement, any pre-effective amendment, the prospectus, any prospectus supplement or post effective amendment to the Registration Statement has been filed and, with respect to the Registration Statement or any post-effective amendment, when the same has become effective; (ii) of any written request by the SEC for amendment or supplements to the Registration Statement or prospectus therein; (iii) of the notification to the Company by the SEC of its initiation of any stop order suspending the effectiveness of the Registrations Statement; and (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification of any Conversion Shares for sale under the applicable securities or blue sky laws of any jurisdiction.

7.6 Termination of Registration Rights. All registration rights granted under this Section 7 shall terminate and be of no further force and effect on the first date upon which the Conversion Shares are eligible for sale by Enzon pursuant to Rule 144(k).

7.7 Furnishing Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to Section 7, that Enzon shall furnish to the Company such information regarding itself, the Conversion Shares held by Enzon and the intended method of disposition of such securities as shall be required to effect the registration of the Conversion Shares.

7.8 Indemnification. In the event any Conversion Shares are included in a Registration Statement under Section 7:

(a) To the extent permitted by law, the Company will indemnify and hold harmless Enzon, its officers, directors, any underwriter (as defined in the Securities Act) for Enzon and each person, if any, who controls Enzon or such underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively a "Violation") by the Company: (i) any untrue statement or alleged untrue statement of a material fact contained in such Registration Statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto, (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading, or (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any state securities law or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities law in connection with the offering covered by such Registration Statement; and the Company will reimburse each of Enzon, and such officers or directors, underwriters or controlling persons for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; provided however, that the indemnity agreement contained in this Section 7.8(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable in any such case for any such loss, claim, damage, liability or action to the extent that it arises out of or is based upon a Violation which

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occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by Enzon or any such officer, director, underwriter or controlling person.

(b) To the extent permitted by law, Enzon will, if Conversion Shares are included in the securities as to which such registration qualifications or compliance is being effected, indemnify and hold harmless the Company, each of its directors, its officers, and each person, if any, who controls the Company within the meaning of the Securities Act, any underwriter and any other shareholder selling securities under such registration statement or any of such other shareholder's partners, directors or officers or any person who controls such other shareholder, against any losses, claims, damages or liabilities (joint or several) to which the Company or any such director, officer, controlling person, underwriter or other such shareholder, or partner, director, officer or controlling person of such other shareholder may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by Enzon under an instrument duly executed by Enzon and stated to be specifically for use in connection with such registration; and Enzon will reimburse any legal or other expenses reasonably incurred by the Company or any such director, officer, controlling person, underwriter or other shareholder, or partner, officer, director or controlling person of such other shareholder in connection with investigating or defending any such loss, claim, damage, liability or action if it is determined that there was such a Violation; provided, however, that the indemnity agreement contained in this Section 7.8(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of Enzon, which consent shall not be unreasonably withheld.

(c) Promptly after receipt by an indemnified party under this Section 7.8 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 7.8, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party shall have the right to retain its own counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if materially prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 7.8, but the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 7.8.

(d) The obligations of the Company and Enzon under this Section 7.8 shall survive completion of any offering of Conversion Shares in such Registration Statement. No indemnifying party, in the defense of any such claim or litigation, shall, except with the consent of each indemnified party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim or litigation.

7.9 Assignment of Registration Rights. The rights to cause the Company to register Conversion Shares pursuant to this Section 6 may be assigned by Enzon only to (i) a party to whom the Preferred Stock may be transferred in accordance with Section 5.1, or (ii) to a party to whom the Conversion

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Shares are transferred, other than pursuant to the Registration Statement or Rule 144, provided that such transferee acquires a number of Conversion Shares equal or exceeding one percent (1%) of the Company's outstanding common stock on the date of transfer. Any such assignment shall be conditioned upon Enzon, within ten (10) days after such transfer, furnishing to the Company written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned and such transferee agreeing to be subject to all restrictions, limitations and obligations set forth in Section 5 and Section 7 this Agreement as if such transferee were Enzon. Any such permitted assignee shall have all the rights of Enzon under this Section 7 with respect to the Conversion Shares transferred (or issuable upon conversion of the Preferred Stock transferred).

8. Miscellaneous.

8.1. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the choice of law provisions thereof, and the federal laws of the United States.

8.2. Public Statements. The parties agree that the initial public announcement of the execution of this Agreement shall be in the form of the press release that describes the nature and scope of the transaction and attached to the Cross-License Agreement as an appendix. Future characterizations of this Agreement, the Related Agreements and the transactions contemplated hereby and thereby shall be consistent with such press release, although the parties recognize that either of them may be obligated to make more specific disclosures of financial or other terms in their filings with the SEC. It is understood by the parties that the initial report on Form 8-K regarding the consummation of this Agreement, the Related Agreements and the transactions contemplated hereby and thereby filed by each

CERTIFICATE OF DESIGNATION

EXHIBIT B

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION, AS AMENDED

EXHIBIT C

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